

# The Canadian Builder and Carpenter

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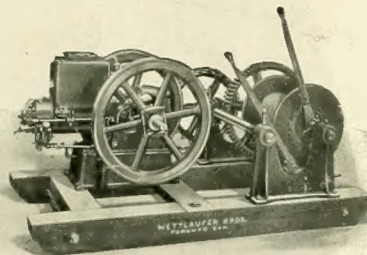
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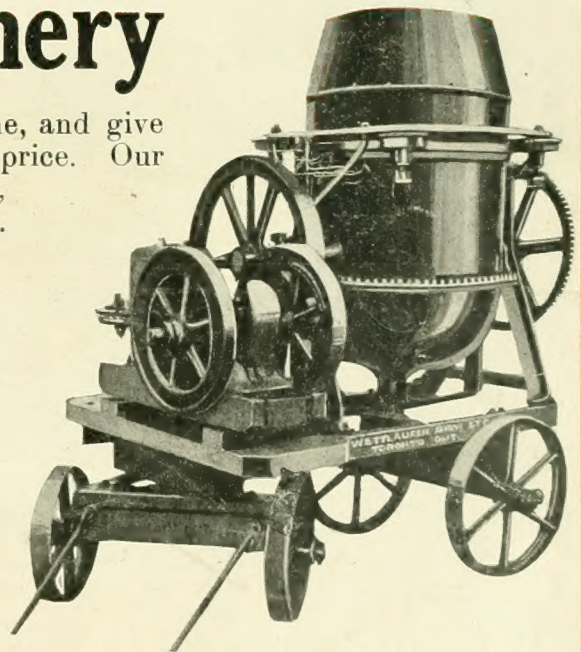
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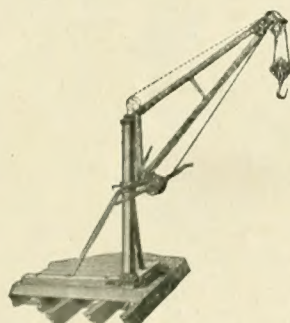


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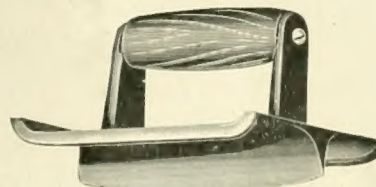
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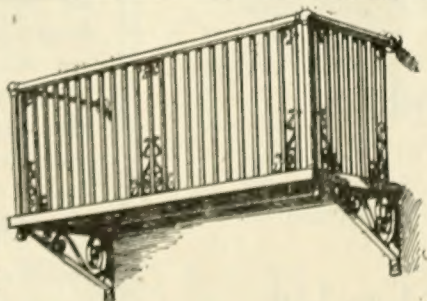
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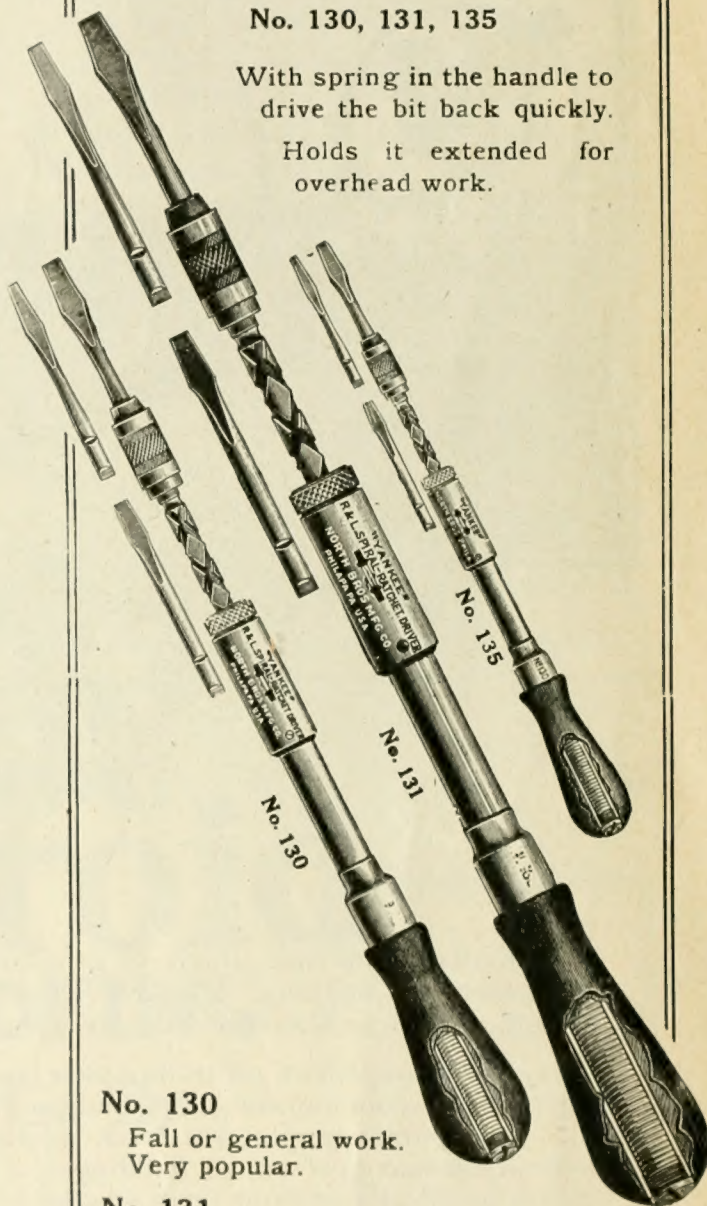
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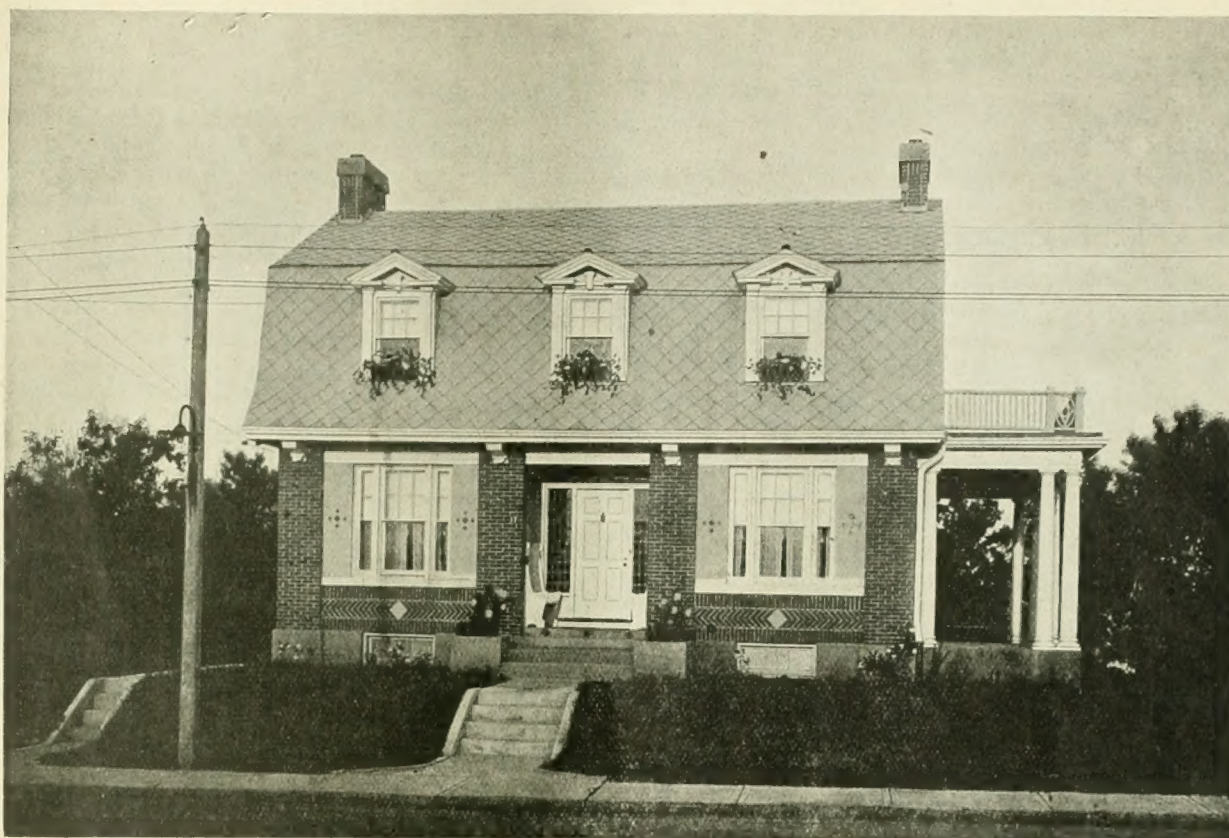
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## Attractive Colonial House at Hamilton, Ont.

*Architect—F. W. Warren*

THE house shown in the accompanying illustrations is located on Leinster Ave., Hamilton. It is of Colonial design, by F. W. Warren, architect, Bank of Hamilton Building, Hamilton.

Red wire-cut bricks with white stucco window panels and chimney panels and grey asbestoslate shingles, combine to make a very attractive and pleasing exterior. The foundation is stone, plastered and floated in cement mortar.

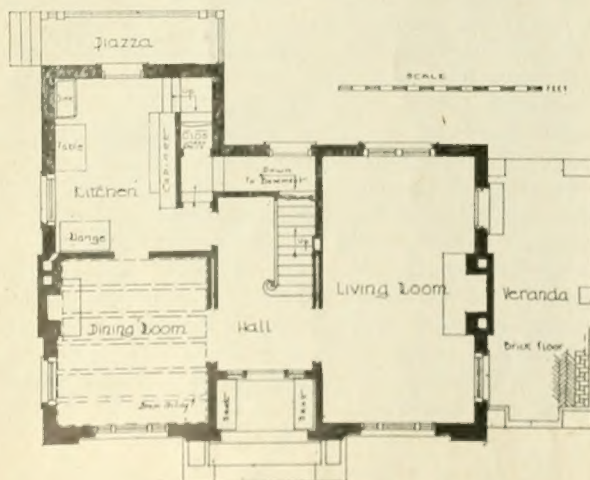
The front porch is very attractive, with its two white enamelled seats, quaint brass knocker and

leaded side lights, where the owner's coat of arms and motto are inserted.

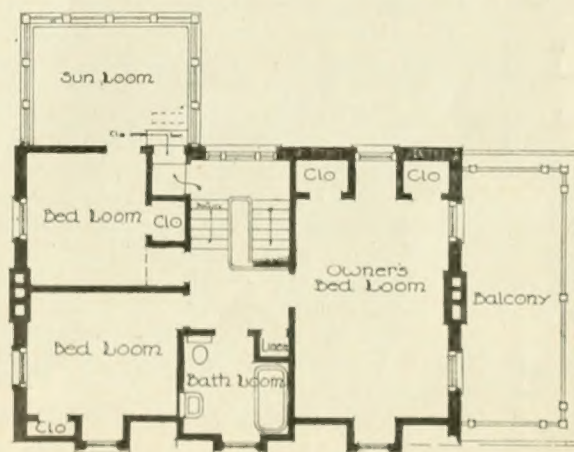
The Colonial interior is also pleasing in layout. The hall is of white enamel with mahogany doors and stained glass windows at the stair landing.

The living room and dining room are finished in stained red oak. The living room extends across one side of the house and has an open tile fireplace. This room opens out on a brick-floored verandah.

The dining room has a fireplace, beamed ceiling and panelled walls.



First floor plan of Hamilton house.



Bedroom floor plan of Hamilton house.



## Workmen's Houses of Shawinigan Power Co

The cuts showing the houses erected by the Shawinigan Power Co., are reproduced on opposite page with the correct underlines. An error was made in the underlines given in the September issue. The ones here given are the correct ones.

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## Building Permit Comparison

The following comparative statement shows the present situation in regard to building permits. There is considerable increase in value of those issued during eight months of this year over the same period last year in Eastern Canada.

	Eleven Western Cities	Twenty-six Eastern Cities
August 1917 .....	\$ 568,432	\$2,559,723
August 1916 .....	1,027,548	3,337,566
8 months 1917.....	3,824,761	20,004,002
8 months 1916.....	4,191,331	18,739,457

There is a big increase in the number of dwellings being erected in Toronto as compared with 1916, according to figures announced by the city architect. He has issued permits for the nine months of this year for 700 dwellings, valued at \$1,787,445, compared with 436 for last year, when the value was \$1,218,850.

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Tenders will be called soon by the manager, L. H. Baque, care of Hotel Dufresne, Three Rivers, for the erection of a \$100,000 brick plant for the Three Rivers Lime, Sand, Brick Company, at Three Rivers, P.Q.

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Contracts for the construction of some one hundred and fifty residences at Ojibway, in addition to a number of four-family flats in which brick only is to be used, will, it is expected, be awarded by the Canadian Steel Corporation, at a very early date. This work will cost approximately one million dollars, and is apart from the building of a long dock and a canal on the river front below Sandwich, all of which is to be a part of the new steel city.

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## Gravity Carriers for Building Materials

Automatic gravity carriers have been found useful in construction work on the other side in saving time and money. The following description of a piece of work on which they were employed indicates to what extent the labor costs may be reduced. There were used in the building 300,000 bricks, a large number of tiles and corresponding quantities of cement and mortar. These materials were received in box cars, where they were loaded on carrier tracks that automatically delivered them to a storage pile, where about 25 per cent. of the bricks were temporarily held, or to the cement storage or to the foot of the hoist. The bricks and tiles were transferred to the elevator platform, raised to the required level, and again placed on carrier tracks that delivered them on the bricklayers' scaffold, distributing them as required.

The end of the track was carried into the side door of the box car, and from that point the track was run in straight or broken lines or curves, as required, and on a light down grade to any required point in the yard, and delivered rapidly an intermittent or con-

tinuous stream of materials that moved by gravity alone, without supervision or attendance, and requiring only that the materials be put on and removed by hand.

The tracks are very light and flexible, and the sections are easily connected together and supported on blocking or light trestles at frequent intervals. They can be shifted easily and passed over or under each other wherever they intersect. On this job about 400 lineal feet of conveyor track was used, and it was installed at an erection cost of about 1/2d. per foot.

Small panels of thin wooden longitudinal boards connected by transverse cleats on the upper side, and called pallets, were provided to receive the loose materials. On one of them five or six cement bags were piled, or about 18 common bricks, in two tiers, and the pallet, being released, would rapidly shoot down to the end of the track, or until removed by an attendant. The light pallets would then be returned for another load, and so on.

Boxes or hods of mortar and loads of bricks were delivered to the foot of the elevator, hoisted, and transferred to a conveyor running along the outside of the wall above the suspended bricklayers' scaffold, where sufficient helpers were stationed to remove the bricks and mortar as they arrived and were needed by the bricklayers. In this way all carrying of mortar or bricks by hand or on cars was eliminated, and the labor force greatly reduced.

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## Concrete Board House

Boards of concrete, with joists, rafters, and stair-frames of the same material, are used in the construction of a novel building in Los Angeles, Cal., the whole being set upon a concrete foundation. Though put together after the manner of a frame structure, the building is as fireproof and durable as the more common types of cement houses, but it requires less material and is lighter in weight.

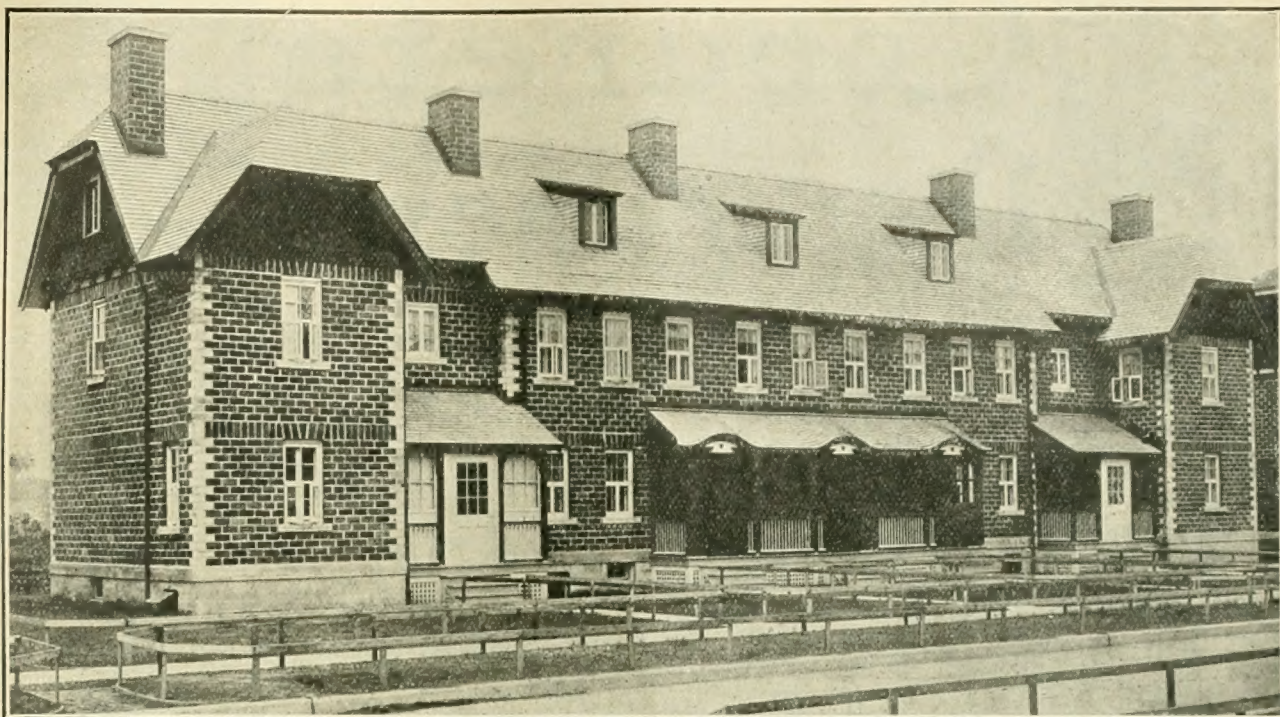
The various parts are poured into forms on the ground near the site, and in that way the danger of breakage is eliminated. The clapboards are poured in sets of ten, the forms being securely clamped together, and the cement allowed to harden in them for several days. Then they are taken out and allowed to cure before being set up. This should be done while the preliminary work is going on, such as excavating and laying the foundation.

The joists, rafters, and other parts are formed in the same manner, and various types of reinforcing are used for each. The boards are reinforced with mesh like chicken-wire, while the timbers have iron rods of varying thickness to strengthen them. These are allowed to project at one end in order to fit into corresponding holes in other timbers, so that the whole framework dovetails. The method of attaching the boards to the 2 x 4's is with nails, and nail-holes are bored into the cement boards before they have set, by running a wire through them. As the cement timbers will not take the nails a strip of wood about an inch and a half thick is wired to the cement scantling.—Scientific American.

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The use of hydro-aeroplanes for detection of forest fires is being considered by certain governmental and private interests in Canada.





This is a group of five houses. The end houses contain three rooms downstairs and three rooms upstairs, and bath. The middle houses contain two rooms downstairs and two rooms upstairs and bath.

## Workmen's Houses of the Shawinigan Power Company

**A**TTRACTIVE houses for workmen have been built by the Shawinigan Water & Power Company at Shawinigan Falls, Quebec.

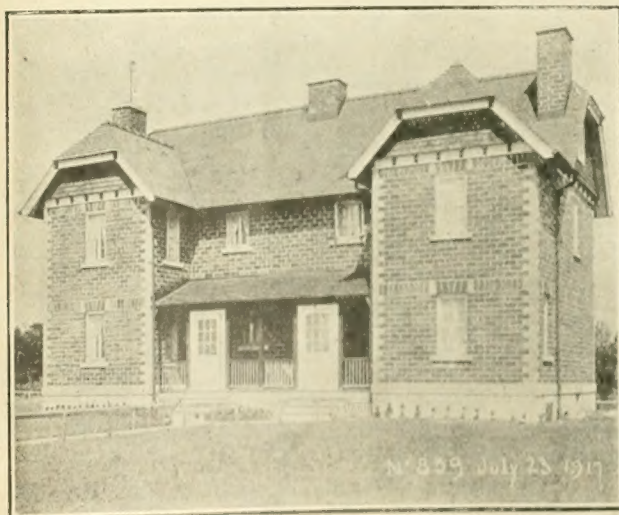
Groups of three types are shown in the photographs reproduced herewith. In one there are three distinct dwellings, the two end houses being of similar design and somewhat different from the centre one. In another there are two dwellings of similar design. The third group of houses shown contains five individual dwellings.

The houses are of very attractive appearance, built with vitrified terra cotta brick, with painted and stained pine trimmings, and are all built upon concrete foundations and cellars.

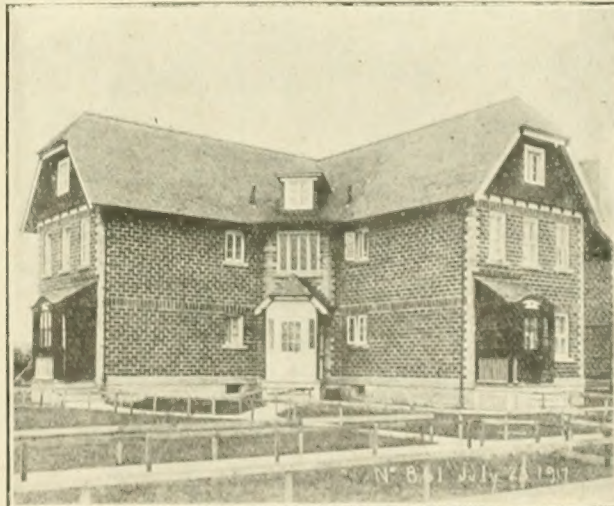
These houses are all heated by hot air.

The fence noticed in front of the houses is temporary, and is intended to save the seeded lawns from being trampled upon.

Anyone interested in the plans may see same at the office of W. S. Hart, Treasurer Shawinigan Water & Power Co., Power Building, Craig St., Montreal.

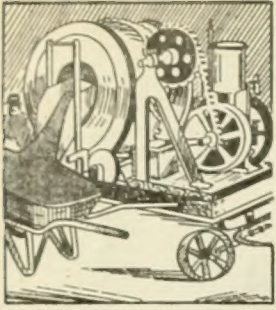


Pair of semi-detached houses. These houses contain three rooms downstairs and three rooms upstairs and bath.

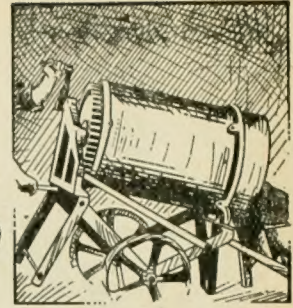


This shows a three house group. The end houses contain two rooms downstairs and two rooms upstairs, and bath. The middle house has three rooms downstairs and four rooms upstairs and bath.





# Concrete Department



## Cement Paint Protects Steel

It is generally conceded that steel embedded in concrete will not rust so long as the concrete is free from voids. In the trials that were carried out a number of steel rods were painted, some with red lead, others with boiled linseed oil, some with neat Portland cement, and a few were not treated in any way. The painted rods were allowed to dry in the shade for one week, and then all were embedded five inches deep in concrete. After a time the specimens were tested in an Olsen machine by pulling the steel rods out of the concrete, and, although the adhesion of the uncoated rods was perfectly satisfactory, it was found to be still better in the case of the rods painted with cement. During the experiments the best results were obtained when the cement setting was maintained repeatedly for several days, either by rain, dew, or by an artificial spray of water. In the first two or three days the coating can be rubbed off easily, but after it adheres firmly to the steel. The adhesion is increased about thirty-five per cent. by a coating of neat cement. To determine the cost of applying a coating of cement to structural steel, one pound of Portland cement was mixed with two-thirds pound of water. This quantity was found sufficient to cover seventy square feet one coat, and, consequently, the expense, other than labor, was very trifling.

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## Cement Lumber

A new idea is the manufacture of "concrete lumber," which "will eliminate the necessity of constructing combustible dwellings." It is argued that wholesale losses through fire necessitate the adoption of new forms of construction that will eliminate combustibility.

Using concrete for the main structure of big buildings is already an established fact, but "concrete lumber" made up and sized and shaped like ordinary lumber from a saw and planing mill is really something new. Joists, flooring, stairs, including strings, treads, risers and handrail; chair and picture rails, window boards and framings, in short, interior lumber of all kinds is being moulded.

A writer in American Industries states that all this is now a reality, and he gives a description of it in minute detail. The interesting thing is that a house that will not burn costs only a little over 30 per cent. more than a quick burner, the respective prices, as given, being 21 and 16 cents per cubic foot. The frame is of steel, and all walls, partitions, ceilings, floors, and roof are steel and cement. The roof is of concrete and over the concrete is placed a waterproofing which is so elastic and pliable that contraction and expansion have no effect upon it. The waterproof film is always

perfect and protects the concrete. The partitions are two inches thick and are of solid concrete reinforced with a special material. In addition to being fire-retardant, like the entire structure, and proof against fire, flood, wind, and earthquake, the partitions are wonderful space-savers. Conducts, water pipes, etc., are taken care of as easily as with hollow partitions.

"The stairway, an important detail in the construction of any fireproof building, is absolute proof against the action of flames. There is no chance for the stairway to be transformed into a vertical flue to carry fire upward, as there is nothing in it to burn.

The interior trim is of wood fastened with screws. Metal trim can be used if desired. Details of this character can be adapted to the taste of the builder without much affecting the fire-proof qualities of the structure.

The cost of the fireproof house as built is approximately 21 cents per cubic foot.

If built with 12-inch solid brick walls with same interior it would cost 17 cents per cubic foot.

If built with stucco on hollow tile with wood interior it would cost 17 cents per cubic foot.

If built of stucco on metal lath with wood interior it would cost 16 cents per cubic foot.

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## Proposed Standard Methods for Measuring Concrete Work\*

The following divisions are recognized as separate and distinct items in the construction of concrete work for which separate modes of measurement are necessary:

### I. Monolithic concrete:

- (a) Concrete.
- (b) Forms.
- (c) Reinforcement.
- (d) Surface finish.

### II. Sidewalks.

### III. Structural cast concrete:

- (a) Concrete.
- (b) Reinforcement.
- (c) Erection.

### IV. Cast concrete trim and ornamental work.

The following general rules shall govern the measurement of the above operations (with the exceptions where specifically noted):

(a) All work shall be measured net as fixed or placed in the structure.

(b) In no case shall non-existent material be measured to cover extra labor.

\*Recommendations of Committee on Measuring Concrete, appointed by American Concrete Institute.



(c) No allowance shall be made for waste, voids, or cutting.

### I. Monolithic Concrete

#### (a) Concrete.

1. The unit of measure for all concrete shall be the cubic foot.

2. In no case shall the measurement of concrete include the forms.

3. All concrete shall be measured net as placed or poured in the structure.

4. In no case shall an excess measurement of concrete be taken to cover the cost of forms or extra labor in placing.

5. All openings and voids in concrete shall be deducted with the following exceptions:

(a) No deduction shall be made for re-inforcement, I-beams, bolts, etc., embedded in concrete except where a unit has a sectional area of more than 1 sq. ft.

(b) No deduction shall be made for pipes or holes in concrete having a sectional area of less than 1 sq. ft.

(c) No deduction shall be made for chamfered, beveled or splayed angles to columns, beams and other work, except where such chamfer, bevel or splay is more than 4 in. wide measured across the diagonal surface.

6. Each class of concrete having a different proportion of cement, sand or aggregate shall be measured and described separately.

7. Concrete in the different members of a structure shall be measured and described separately according to the accessibility, location or purpose of the work.

8. Concrete with large stones and rocks embedded in same (cyclopean masonry) shall be measured and described according to the richness of the mix and the percentage of rock in same.

9. Concrete in stairs shall be measured by the cubic foot and shall include surface finish when the mixture is the same throughout.

#### (b) Forms

10. The unit of measure for form work shall be the square foot of actual area of the surface of the concrete in contact with the forms or false work.

11. Forms shall in every case be measured and described separately and in no case shall the measurement of concrete include the forms.

12. No deduction shall be made in measurement of surface of concrete supported by forms, because of forms being taken down and re-used two or three times in the course of construction.

13. The unit price for superficial measurement of forms, shall include the cost of struts, posts, bracing, bolts, wire ties, oiling, cleaning, and repairing forms. No measurement to be made of these.

14. No distinction shall be made between wood and metal forms.

15. Forms to different parts of a structure shall be measured and described separately according to the position in the structure, accessibility, purpose and character of the work involved.

16. No allowance shall be made for angle fillets or bevels to beams, columns, etc., but curved moldings shall be measured and described separately as herein-after provided.

17. No deduction in measurement of forms shall be made for openings having an area of less than 25 sq. ft.

18. No deduction shall be made in floor forms for heads of columns of any shape.

19. No deduction shall be made in column and girder forms for ends of girders, cross beams, etc.

20. No allowance shall be made for hand-holes in column forms for clearing out rubbish.

21. The measurement of column forms shall be the girth of the four sides or circumference multiplied by the height from the floor surface to the under side of floor slab above.

22. Forms to octagonal, hexagonal and circular columns shall be measured and described separately from forms to square columns.

23. Caps and bases to columns and other ornamental work shall be measured by number and fully described by overall dimensions.

24. The measurement of beam forms shall be the net length between columns multiplied by the sum of the breadth and twice the depth below the slab, except for beams at edge of floor or around openings, which shall have the thickness of floor added to the sum of the breadth and twice the depth.

25. Wall forms shall be measured for both sides of concrete wall.

26. Allowance shall be made by number for pockets left for future beams.

27. Moldings in form work shall be measured by the lineal foot.

28. Forms to circular work shall always be measured separately from forms to straight work.

29. No measurement or allowance shall be made for construction joints in slabs, beams, or arch ribs, to stop the day's concreting.

30. Construction joints or expansion joints to dams and other large masses of concrete shall be measured by the square foot as they occur.

31. Forms to cornices shall be measured by the lineal foot and the girth stated. (The term girth shall be taken to mean the total width of all curved and straight surfaces touched by the forms.) Plain forms to back of cornices to be measured separately.

32. Forms to window sills, copings and similar work shall be measured by the lineal foot.

33. Forms to the upper side of sloping slabs, such as saw-tooth roofs, shall be measured whenever the slope of such slab with the horizontal exceeds an angle of 25 degrees.

34. Forms to the under side of stairs shall be measured by the superficial foot.

(a) Forms to the front edge of the stairs shall be measured by the lineal foot.

(b) Forms to the ends of steps shall be measured by number.

#### (c) Reinforcement

35. The unit of measure of reinforcement shall be the height in pounds.

36. The weight shall be calculated on the basis of a square rod 1 in. x 1 in. x 12 in., weighing 3.4 lb.

37. Steel rods for reinforcement shall be measured as the net weight placed in the building.

38. Deformed bars shall be measured separately from plain.

39. No allowance shall be made for rolling margin.

40. No allowance shall be made for cutting or waste.

41. No allowance shall be made for wire ties, spacers, etc.

42. No separation shall be made according to accessibility, location and purpose of reinforcement except in special cases.

43. In measuring reinforcement the rods shall be



measured by the lineal foot as laid. All laps shall be allowed for.

44. The rods of each different size shall be measured and described separately.

45. Bent bars shall be measured separately from straight bars.

46. Pipe, sleeves, turnbuckles, clamps, threaded ends, nuts, and other forms of mechanical bond shall be measured separately by number and size and allowed for in addition.

47. Wire cloth, expanded metal and other steel fabrics sold in sheets or rolls shall be measured and described by the square foot. The size of mesh and weight per square foot of steel in tension shall be stated. No allowance shall be made for waste, cutting, etc., but all laps shall be measured and allowed for.

#### (d) Surface Finish

48. The unit of measure for finish of concrete surfaces shall be the square foot. Finish shall always be measured and described separately.

49. No measurement or allowance shall be made for going over concrete work after removal of forms and patching up voids and stone pockets, removing fins, etc.

50. Granolithic finish shall be measured by the square foot and shall include all labor and materials for the thickness specified.

51. Finish laid integral with the slab shall be measured separately from finish laid after the slab has set.

52. No allowance shall be made for protection of finish with sawdust, sand or tenting.

53. Grooved surfaces, gutters, curbing, etc., shall be measured separately from plain granolithic and shall be measured by the square foot or lineal foot as the case may require.

54. The following shall be measured by the square foot:

Cement wash. (State how many coats.)  
Rubbing with carborundum.  
Scrubbing with wire brushes.  
Tooling.  
Picking.  
Plastering.  
Etc.

## II. Sidewalks and Pavements

55. Sidewalks and pavements shall be measured by the square foot, the thickness to be stated in description.

56. Finish lining in squares and cinder or stone foundations shall not be separately measured but shall be described.

57. Curbs and curb and gutter work shall be measured by the lineal foot and separated according to character and size, and shall include foundations, forms, finish and cost of special tools if any.

58. In measuring curbs the full height and width or thickness of same shall be taken to extreme edge.

59. Circular corners to curbs and gutters shall be measured separately by number, stating radius and length measured on the curve.

60. Vault lights shall be measured by the square foot, the size and type of glass, forms, steel and finish to be described but not measured separately. Beams under vault lights shall be measured by the lineal foot. In measuring vault lights the measurement

shall go at least 4 in. beyond the outside line of the glass in each direction.

## III. Structural Cast Concrete

### (a) Concrete.

61. The term structural cast concrete is taken to include unit construction by the various systems.

62. The unit of measurement for structural cast concrete shall be the cubic foot, and shall be measured net as provided for monolithic concrete.

63. The various members shall be measured on the ground before erection.

64. No measurement shall be taken of forms.

### (b) Reinforcement

65. Reinforcement shall be measured separately as provided in paragraphs 35 to 57, inclusive.

### (c) Erection

66. The unit of measure for the erection of structural concrete shall be the weight of the finished members in pounds.

67. In measuring the erection of structural cast concrete having a crushed stone or gravel aggregate, the concrete shall be assumed to weigh 159 lbs. per cubic foot.

68. No measurement shall be taken of the grouting in structural cast concrete. It shall be deemed to be covered in the price of erection.

## IV. Cast Concrete Trim and Ornamental Work

69. Cast concrete trim shall be measured by the cubic foot, but the measurement shall be the smallest rectangular solid that will contain the piece measured and not its actual content.

70. No allowance shall be made for forms.

71. No allowance shall be made for reinforcement in trim and ornamental work.

72. No allowance shall be made for surface finish in trim and ornamental work.

73. Circular work shall be measured separately from other work.

74. Mitre blocks and end blocks for cornices, etc., shall be measured separately from straight molded work.

75. Vases, seats, pedestals, balusters and other similar items shall be measured by number and description with overall dimensions.

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## Safe Loads on Masonry

	Tons per sq. ft.
Kiln dried bricks, laid in mortar .....	8
Ordinary brick, laid in Portland cement .....	5
Hard brick, laid in lime mortar .....	6
Hard brick laid in Portland cement and lime mortar .....	9
Hard brick, laid in Portland cement and mortar ..	12
Pressed brick, laid in lime mortar .....	8
Pressed brick, laid in Portland cement mortar ..	14
Rubble stonework in lime mortar .....	4
Rubble stonework in lime and cement mortar ....	6
Rubble stonework in Portland cement mortar ..	8
Concrete, one part cement, two parts sand and five parts stone .....	15

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The best way to learn things is to have an open mind as well as an inquiring disposition. The man with his mind made up and closed cannot learn much.







# The Canadian Builder and Carpenter

D. O. MCKINNON  
GENERAL MANAGER

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G. C. KEITH, M.Sc.,  
EDITOR

VOLUME 7

TORONTO, OCTOBER, 1917

NUMBER 10

## Help by Ordering Full Carloads

The railways solicit your co-operation in their endeavor to provide all their patrons with a satisfactory freight car supply.

Many consignees never order more than the minimum authorized under the tariffs and classification. The result is an economical waste which reduces the efficiency of the railways and the public suffers.

To increase the average car loading by 1 ton, would be equivalent to placing 10,960 additional freight cars in service in Canada.

To fully load cars would go a long way towards solving our transportation difficulties.

Some consignees cannot always order full carloads, but they are requested to help by ordering in as large units as possible.

The difference between minimum loads and full loads of certain standard commodities is given herewith:

### Cement Shipped In

87½ lb. sacks. Minimum load 457 sacks—A 30 ton car will hold 754 sacks; a 40 ton car will hold 1,074 sacks.

### Nails Shipped In

107 lb. kegs. Minimum load 280 kegs—A 30 ton car will hold 616 kegs; a 40 ton car will hold 878 kegs.

To most consignees such an appeal is unnecessary—they do not delay cars under load. There are others, however, who appear to be satisfied if they release cars in what is known as "free time." Again, there are others who hold cars in storage service for weeks, and such consignees are largely responsible for car shortages and terminal congestion.

A recent check of cars placed for unloading and held by consignees at some of the stations on one of the railways showed 700 cars delayed an average of twelve days. Had these cars been released within even five days they would have made nearly 1,400 trips, and would have handled about 35,000 tons of freight. 2,615 other cars unloaded within three days could have been placed for delivery on the tracks occupied by these 700 delayed cars.

The railways do not want their cars to earn demurrage, but want them employed in carrying freight. A rolling car gathers no demurrage.

If consignees will order freight from shippers so as to increase the average loading by 5 tons per car, and if they will reduce the average delay in unloading by 24 hours, it will prevent car shortages.

## Conserve Fuel

The Premier of Ontario is asking all users of fuel to unite in saving it. The following request by him should be generally heeded:

The Government of Ontario, at the request of the Dominion Fuel Controller, hereby draws public attention to the fuel situation in the Province.

War conditions have affected the normal supply of coal, and rendered imperative that every consumer practise the utmost thrift.

Energetic measures are being adopted to prevent fuel shortage. This can only be attained by the fullest co-operation and assistance of every coal consumer.

Co-operation may be effected by the adoption of the following precautions, viz.:

1. Refrain from using fuel of any kind, including gas, until it becomes absolutely necessary.
2. Practice rigid economy in the use of fuel.
3. Wherever possible use substitutes for coal to the fullest possible extent.
4. Guard constantly against waste of fuel when making or cleaning fires, and when using gas.
5. Thoroughly sift all coal ash, and burn the residue. The result will be surprising. ONE-TENTH of the fuel originally fed to the fire has been recovered and utilized in this way.

The faithful observation of the foregoing by all consumers will have a marked effect in conserving the coal supply and may avert a serious crisis.

Municipal, religious, educational and other authorities and bodies, are requested to repeatedly urge and impress the foregoing considerations upon the public.

※ ※

## The Amateur Architect

He built his house without the aid  
Of architect or plan,  
And yet one little error made  
This most unhappy man.  
It was an excellent affair:  
Three stories, each a flat.  
But anywhere  
To put a stair—  
He never thought of that!

### LOOKS FOR CANADIAN BUILDER

Canadian Builder and Carpenter,  
Toronto.

Dear Sirs—

You will find \$1.00 enclosed for a renewal to The Canadian Builder and Carpenter for 1918. I like it fine, and look for its coming monthly.

Yours respectfully, D. L. S.



# News From Coast to Coast

## Winnipeg Builders' Exchange a Live Organization

The Winnipeg Builders' Exchange is showing its heels to similar organizations in Canada. During this year it has greatly increased its membership, and good fellowship has been everywhere manifest. Monthly meetings are held, the regular meeting being held at Kensington Cafe, on Sept. 20.

On August 13, over 1,500 of the members and their friends enjoyed a picnic to Winnipeg Grand Beach. It was a great success. There were old-time athletics and new races which were keenly contested and greatly enjoyed.

A feature of the picnic was the glad-hand idea, to encourage goodfellowship and acquaintanceship.

Two members of the party, the identity of whom

train, closing an ideal day's outing by dancing in the fine pavilion at Grand Beach. So successful was the outing that it will be made an annual affair.



## Annual Report of B.C. Forest Branch

The annual report of the British Columbia Forest Branch for 1916, has been issued. It reviews the work of the branch including the work of the B. C. Lumber Commission in Eastern Canada. It is of interest to note the following comments on the work of the Commissioner:

The lumber commissioner has by personal contact with the leading architects and engineers given these professions a better understanding of British Columbia woods. A very large proportion of the building-work



W. P. AISOP  
President Winnipeg Builders' Exchange.



J. S. HOOPER  
Secretary Winnipeg Builders' Exchange.

was unknown, except to the committee, one representing the supply men and the other the contractors, carried an envelope, which they handed to the fiftieth person who had extended the handshake to them since the special train left Winnipeg. The contents of the envelopes entitled the winner to a ton of coal. As a result of this novel feature, everyone was anxious to shake the hand of every stranger and acquaintance, too warm they had not actually greeted that day. The "mysterious" supply man proved to be D. D. Wood, and W. H. Carter was the fiftieth to shake hands with him, while the handshake of George Bertram, when he met A. J. Bonnett, the "mysterious contractor," as the latter was stepping on the train to Winnipeg in the evening, won for him a ton of "black diamonds."

Along with the game, there were refreshments and abundance. Many of the players stayed for the last

in Eastern Canada is done under the direction and supervision of architects and engineers, who specify the kinds of material to be employed. As far as lumber was concerned, it was found that British Columbia woods were specified very rarely, the call being for native eastern woods when suitable or for the imported southern yellow pine, the latter being usually the wood specified for ordinary and better-class work. After being shown facts and figures proving the qualities and records of British Columbia wood, architects and engineers were, generally speaking, ready to substitute Douglas fir for southern pine, the only great difficulty in the way being that of quick delivery. Many specifications were referred to our commissioner for his criticism, and many were changed in order that British Columbia timber should give better satisfaction. This part of the work has been slowly develop-



ing into a sort of a consulting business. Large concerns about to erect new buildings invite the commission to discuss with their architects and engineers the best methods of construction, the most economical sites for specifications, and other engineering points in connection with lumber.

It was found that only by laws, where they exist at all, uniformly gave preference to southern pine. For instance, Toronto allowed a fibre stress for Douglas fir of only 1,200 lb. per square inch, as against 1,600 lb. for southern pine, which meant that the southern pine had a 25 per cent. advantage over Douglas fir. After repeated and persistent endeavor Toronto now admits Douglas fir and southern pine on an even basis. This is particularly important, because in Ontario the standard for Toronto is usually followed by other cities and municipalities.

During the year exhibits of British Columbia forest products were shown in the Builders' Exchange, London; Board of Trade, Hamilton; Board of Trade and Builders' Exchange, Montreal, in addition to the main exhibit in the Commissioner's office in Toronto. The display at the Canadian National Exhibition was carefully prepared, gave British Columbia lumber extensive publicity, and was awarded a gold medal by the exhibition authorities. Many different trade inquiries resulted, and there was distributed a great deal of general information about British Columbia woods.

The Dominion Government, Harbor Commissions, School Boards, Power Commissions, etc., had all been accustomed to use southern pine. With large users such as these, British Columbia timber is now superseding the imported article.

Manufacturers of products in which wood is used have been shown where they could obtain Canadian material. This class of business is highly desirable, inasmuch as it does not vary from time to time to the same extent as the retail lumber trade. It demands a special product and is willing to pay good prices. For instance, several wagon manufacturers who had hitherto used southern pine have secured their 1917 supplies from British Columbia.

Such publicity work would, of course, be valueless if it were not followed up energetically by the mills of this Province. The fact that shipments to the East have doubled during the past year is concrete evidence of the fact that British Columbia lumbermen are paying marked attention to the Eastern market. It is to be confidently expected that British Columbia's trade in lumber with Eastern Canada will continue to increase at a rapid rate. The market there is large and steady and will help to stabilize our British Columbia industry.

#### Prairie Market

On the prairie the main object was to increase the use of wood on the farm. A series of building pamphlets was issued in co-operation with the prairie agricultural authorities.

In the distribution of these bulletins the method was adopted of securing a written request from a farmer, and then mailing the pamphlets direct. In this way there was no overhauling and unnecessary waste of copies by broadcast distribution.

In 1916, 412,000 farm bulletins were distributed.

There is devoted to a review of the export lumber trade of British Columbia and a general review with statistics of logging, sawmills, pulp and paper industry, forest protection, etc. Mr. M. A. Grainger is secretary for British Columbia.

## Midland Stock Designs

The 1917 catalogue of the Georgian Bay Shook Mills Limited, Midland, Ont., shows a complete line of Midland stock designs and planing mill products. These include a complete line of interior trim, verandah materials, frames, turnings, dressed and matched lumber. Illustrations and tables of sizes and prices are given.

## Catalogue of Automatic Sprinkler Co.

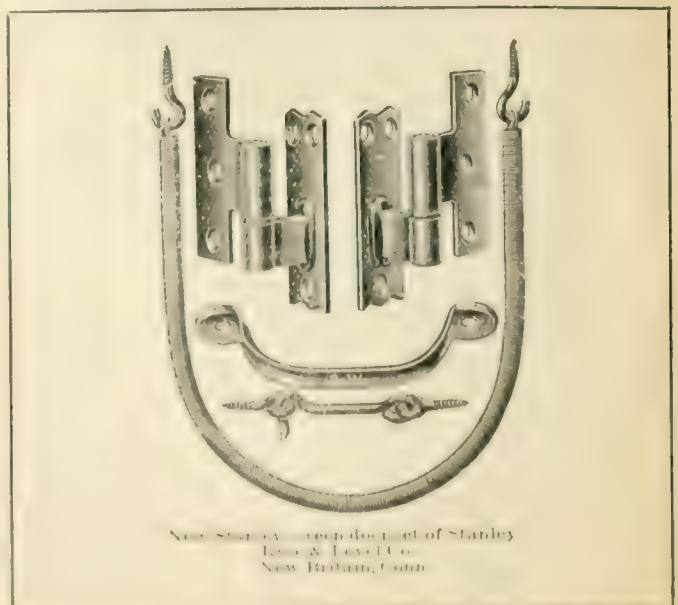
Under the title "The Pursuit of Safety," the Automatic Sprinkler Co., 123 William St., New York, have issued an exceedingly attractive treatise showing the value of automatic sprinklers in preventing fires. Photographs of typical installations of sprinkler systems are given along with cuts of buildings where such systems have been installed. The book is well designed and well-prepared and should be perused by builders interested in constructing fireproof buildings.

## Short Items of News

The Building Material Dealers' Association of Greater Winnipeg, and the Retail Lumber Association of Greater Winnipeg, are now located at 305 Scott Block, 272 Main St. S., Winnipeg. Mr. Rowley Jex Long is secretary.

A building by-law has been prepared for the town of Campbellton, N.B., by Mr. Brodie, architect, and has come before the by-laws committee for consideration.

Heretofore New Toronto builders went ahead constructing any sort of a dwelling according to individual means or fancy. The council has now decided that there must be some standard arranged, and a building by-law was passed on September 11. All builders are now required to secure a permit from the building committee after plans and specifications have been submitted for approval. This arrangement will insure more uniformity of dwellings, and safer and more substantial buildings. All property within the village south of the Lake Shore road is restricted for fireproof buildings only.



Stanley safety chain, a product of Stanley  
Iron & Lumber Co.  
New Britain, Conn.



## Sergeant Richard C. Howson

ON Tuesday, August 28, a cable was received from Lieut. John A. Gibson, of the Toronto staff of The Commercial Press Limited, that Sergeant Richard C. Howson, had "died of wounds" in France.

Prior to enlisting Mr. Howson had been manager of the Montreal office of The Commercial Press, where he had won a great host of friends. A few years before he had also travelled throughout the Maritime Provinces and the Northwest Provinces as a subscription representative. Hundreds of subscribers will probably remember him, by the accompanying photograph, as the young man who secured their first year's subscription.

"Rich" Howson was a young man of a type Canada can ill afford to lose. Though an athlete of excep-



SEERGEANT RICHARD C. HOWSON

tional strength and skill, though ever alert for a frolic, he never lost his sense of dignity or his innate courtesy to others. Throughout ten years' intimate acquaintance his wisest lover knew him to speak an ill word of anyone, never knew him to swear, or to indulge in lewd jokes or conversation.

He was the soul of kindly consideration for others. He was of exceptional physique, also too big of soul ever to be ungenerous. He went overseas with no desire for adventure or for glory, but out of a definite sense of duty. Though details of his death have not yet arrived, one knows from his character and his record that he gladly made the supreme sacrifice for his country's sake, for the cause of freedom.

When he decided to offer his services to his country he took the officers' training course at Toronto. When this was completed, however, there was a surplus of officers. He at once reverted and won his stripes by good work in camp.

He went overseas with the Machine Gun Section of the 126th (Peel) Battalion, but later was transferred to the 116th, which battalion has been engaged in several stiff engagements during the past few months.

Sergeant Howson is the second member of the staff of The Commercial Press to make the great sacrifice, Lieut. Eric M. Connell having been killed in the spring of last year.

To maintain freedom Canada is paying a big price in the loss of such men. Those who stay behind should remember those who have "paid" and should in every way "do their bit" toward defeating the enemy.

D. O. McKINNON.

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## Beautiful Office Building

John Bertram & Sons Co., Dundas, Ont., are completing an exceedingly attractive office building. It is faced with "Rug" brick made by the Milton Pressed Brick Co., Milton. The joints are deep set and uniform. The facing is gray granite from Stanstead, Quebec, the combination giving a very beautiful effect.

The new office will, it is hoped, be completed early in January, so that a description may be included in the February issue.

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## Building Concrete Ships in Montreal

The concrete boat now being built by the Atlas Construction Co. for a number of Montreal capitalists, is fast approaching the stage when the pouring of the cement will commence. The reinforced steel frame is about finished, and the exterior form is just about completed. It is expected that the placing of the inner forms will be started this month, and shortly after the concrete will be poured. When this latter operation begins, the pouring of the mixture will be continuous until well above the load water line, to insure a homogeneous body of material.

※ ※

## Building Active in Oakwood District, Toronto

"The demand for good class houses for rent and to sell still continues in the Oakwood district," said Manager M. Munn of the Oakwood Realty Company. "Recently we sold outright five semi-detached solid brick residences on Lander Avenue, and applications are coming in freely to our firm and other real estate merchants in the district."

Miller Brothers, builders, are at present erecting seven new up-to-date houses on Glenholme Avenue, Toronto, and it is the intention of this firm to commence in the early spring excavating for twenty-five first-class dwelling houses on the west side of Lander Avenue, Toronto.

※ ※

The R. Readlaw Lumber Company, Toronto, gave a complimentary dinner to the representatives of their wholesale and retail staff on October 4. The guest of honor was Mr. C. G. Macbeth, who has been with the firm since October 1, 1902. Mr. Readlaw commented on the happy relations which had always existed between Mr. Macbeth and the firm and staff, and presented him with a gold watch, suitably inscribed, and an engraved silver tray for Mrs. Macbeth.







# The Canadian Builder

¶ If you sell equipment or supplies to Builders, Carpenters or Contractors (not engineering), you will find The Canadian Builder an exceptionally efficient advertising medium.

Send for Complete Information and Rates

The Commercial Press, Limited Toronto, Ont.

Hydrated lime in paper bags (40 lbs.)— Bags included in price, but not returnable.	
Per ton	
Delivered	\$16.35
F.O.B. yard	15.45
F.O.B. cars, city	14.55
Hydrated lime in cotton bags—(100 lbs.)— bags included in price.	
Per ton	
Delivered	\$19.55
F.O.B. yard	18.65
F.O.B. cars, city	17.55
Sacks returnable 20c each.	
Portland cement in bags—	
Per bbl.	
Delivered	\$4.00
F.O.B. yard	3.90
F.O.B. cars, city	3.70
Note—Four sacks make a barrel, 350 lbs.	
Mortar cement in bags—	
Per bag	
Delivered	\$.64
F.O.B. yard	.62
F.O.B. cars, city	.54
Note—1 sack mortar cement weighs 70 lbs. Delivered in ton lots; less than ton lots 50c extra.	
Best Bros. Acme and No. 1 Keenes cement in bags—	
Per bag	
Delivered	\$2.50
F.O.B. yard or cars, city	2.25
Empire Keenes cement in 100 lb. bags—	
Delivered	2.15
F.O.B. yard or cars, city	2.00
Note—a sack contains 100 lbs. gross.	
Fine Keenes cement in bags— (3 sacks per bbl.)	
Per bbl.	
Delivered	\$11.10
F.O.B. yard or cars, city	10.25
Superfine Keenes cement in bags— (3 sacks per bbl.)	
Delivered	13.55
F.O.B. yard or cars, city	12.70
Gypcement in bags—	
Per ton	
Delivered	\$13.00
F.O.B. yard	12.00
F.O.B. cars, city	11.55
Hardwall plaster Nos. 1 and 2, wood fibre plaster, ivory finish, gold dust finish, (in bags)—	
Per ton	
Delivered	\$19.00
F.O.B. yard	18.00
F.O.B. cars, city	17.75
Empire finish plaster, Peerless prepared finish, Sinite finish plaster (in bags)—	
Delivered	\$22.50

F.O.B. yard	21.50
F.O.B. cars, city	21.00
Plaster of paris and Stucco (in bags)—	
Delivered	20.50
F.O.B. yard	19.75
F.O.B. cars, city	19.50
Note—20 sacks make 1 ton gross. Delivered in ton lots; less than ton lots 50c extra.	
Plaster of paris in barrels— (Price includes barrels.)	
Per bbl.	
Hammer Brand, 320 lbs. gross	\$4.40
Empire and Peerless, 250 lbs. gross	3.30
Plasterers' hair—	
Per bale	\$3.30
Per bush.	.90
Mortar color—	
Per 100 lbs.	
Red	\$4.50
Black	5.50
Buff	5.50
Chocolate	6.50
Drain tile—	
3 in. delivered or at yard, each	\$.05½
4 in. delivered or at yard, each	.07
Each tile is one foot long.	
Wood lath—	
No. 1 delivered, per M.	\$6.00
No. 2 delivered, per M.	5.25
Gypso fibre—	
Per M. ft.	
¼ in. x 32 x 36—	
Delivered	\$32.25
F.O.B. yard	27.20
F.O.B. cars, city	26.15
¼ in. x 32 x 48 and 60—	
Delivered	33.00
F.O.B. yard	28.60
F.O.B. cars, city	27.25
¾ in. x 32 x 36 and 48 and 60—	
Delivered	36.30
F.O.B. yard	32.70
F.O.B. cars, city	30.80
½ in. x 32 x 36 and 48 and 60—	
Delivered	41.50
F.O.B. yard	37.00
F.O.B. cars, city	35.00
Note—If delivered in more than 2,000 feet lots, \$2.00 per M. less.	
Plaster blocks—	
Per 100 sq. ft.	
3 in. hollow tile—	
Delivered or F.O.B. yard	\$ 8.55
F.O.B. cars, city	7.25
4 in. hollow tile—	
Delivered or F.O.B. yard	10.00
F.O.B. cars, city	8.20

6 in. hollow tile—	
Delivered or F.O.B. yard	13.55
F.O.B. cars, city	11.50
2 in. furring tile—	
Delivered or F.O.B. yard	6.30
F.O.B. cars, city	5.20
2 in. solid tile—	
Delivered or F.O.B. or F.O.B. yard	8.55
F.O.B. cars, city	7.25
Fire clay—	
Delivered or F.O.B. yard, per 100 lbs.	1.00
Fireclay (Canadian)—	
Delivered, per M.	\$70.00
F. O. B. yard	67.50
F. O. B. cars	65.00
In quantities less than 1M, 7½c each.	
Fire brick—(American)	
Per M.	
Delivered	\$90.00
F.O.B. yard	87.50
F.O.B. cars, city	82.50
Less than M. delivered, per 100	9.50
Special prices on fire blocks and specials on application.	

## PRICE AT VANCOUVER

Shingles, lath, etc.—	
XXX B. C. cedar shingles, per	
M.	\$ 3.15
No. 1 pine lath, per M.	2.35 to 2.65
Brick, tile, terra cotta, sewer pipe—	
No. 1 dry pressed red bricks, per M.	30.00 to 45.00
No. 1 dry pressed buff bricks, per M.	40.00 to 45.00
Red stock bricks	14.50
Fire brick	40.00
Fireclay, per ton	12.50
Sewer pipe, 4 inch, per ft.	.12½
6 in., per ft.	.21
8 in., per ft.	.30
10 in., per ft.	.40
12 in., per ft.	.50
Cement plaster, stone, etc.—	
Cement, Portland (bags extra), per bb.	
	2.45
Keene cement, per ton	82.00
Lime, per bbl.	1.50
Hydrated lime, per ton	14.00
Alca Lime, per ton	16.00
Plaster of paris, per bbl.	4.50
Hardwall plaster, per ton	15.50



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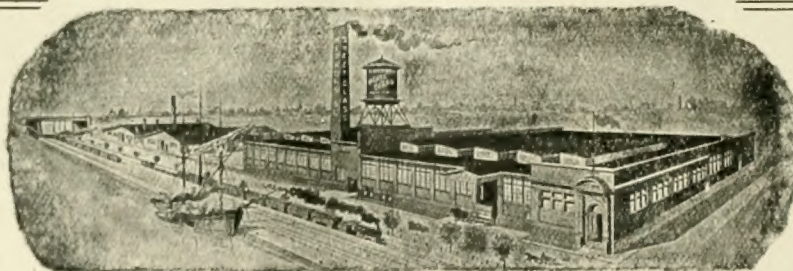
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**GLASS**  
**BENDERS**  
**TO**  
**THE**  
**TRADE**

**THE TORONTO PLATE GLASS IMPORTING COMPANY, LIMITED**

Plate, Window, Figured, Stained, Wired, Bent, Mirror  
and Ornamental Glass

DON ROADWAY

TORONTO

**R. Laidlaw Lumber Co., Limited**

*Everything in Lumber*

*Timbers, Sash, Doors, Columns, Etc.*

Head Office: 65 Yonge St., TORONTO

*This is a reminder to read ALL the  
advertisements in The Canadian Builder  
and Carpenter every month.*

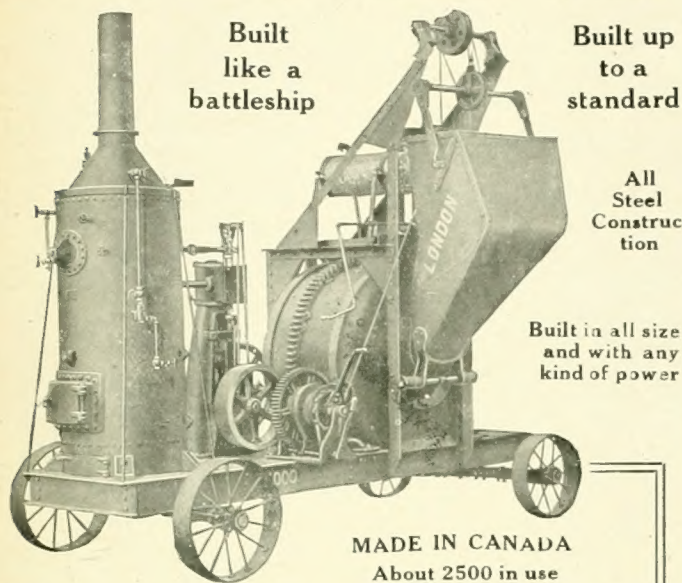
**Are You Getting This  
Paper Regularly**

If not, send your name and address,  
together with a one dollar bill, and  
we will deliver it to you each month,  
postage paid.

*The Canadian Builder and Carpenter*  
32 Colborne St. Toronto



## London Batch Concrete Mixer



MADE IN CANADA  
About 2500 in use

### THE LONDON CONCRETE MIXER

will produce a batch per minute, and will run for years without repairs. This machine is built on the most modern and approved designs. Send for catalogue No. 1, stating size or kind of work machine is required for.

**London Concrete Machinery Company**

Dept. 2 LONDON, ONTARIO Limited  
World's largest manufacturers of concrete machinery.

## Notice to Readers

Have you put up what you consider an attractive house recently?

You will have drawings or blue prints, bills of materials and specifications.

Why not send them to us for publication in *The Canadian Builder*. The advertising you would get as a result would make it well worth your while.

The Commercial Press, Limited  
Toronto

Most of you mechanics use

# DISSTON

## SAWS AND TOOLS

### Do You?



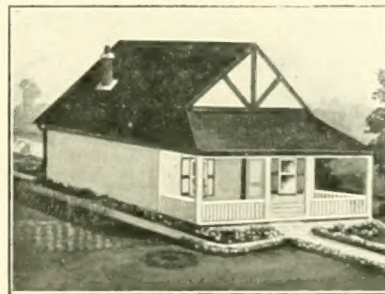
Ask any hardware dealer what saw the mechanic prefers and the chances are he'll tell you the *Disston*. Most mechanics *do* use the *Disston*.—a recent investigation again proved that fact.

The endorsement of the majority of skilled artisans, men whose livelihood depends on tools, ought to be a pretty safe guide. The chances are more than even that you use the *Disston* now; but if you don't, try them next time.



**Henry Disston & Sons**  
Limited

2-20 Fraser Ave., Toronto



### This Simple Little Cottage

has a Bathroom, a Water Closet, and a Kitchen Sink, as well as Hot Water Heating

*all made possible by*

### A Peerless Pneumatic Water System

which cost the owner less than \$150.00

Think what it means—

*For the Occupant*  
**MORE COMFORT**

*For the Owner*  
**MORE RENT**

*It is always a pleasure to us to furnish Specifications, Prices, or any other information.*

**National Equipment Co., Limited**

1 Wabash Ave., Toronto

*The only MAKERS of complete Water Systems in Canada*



# This man KNOWS he is right

His pay-roll will represent the working time his firm has bought and is paying for—no more, no less.

This keeps down overhead expense. It keeps up production. It stimulates good will for the firm on the part of every employee who, in turn, KNOWS that *his* time record is right because he made it himself.

One more case of where a machine should be used instead of a human being—the time-keeper.

## International Time Recorders

No use trying to "sell yourself" that we are wrong, for if you succeed it costs you money, as proven by the thousands of successful firms who use International Time Recorders.

We invite you to give us an opportunity to suggest a pay-roll and cost-keeping system that will be modern and efficient, and will exactly suit **your** business. This suggestion will cost you nothing, and obligate you to nothing.

*Made in Canada, our product is Canadian product, Canadian labor, Canadian capital, and wherever possible, made from Canadian materials*

## The International Time Recording Co. of Canada, Limited

Anderson St., Toronto  
F. E. Mutton, Gen.-Man.

Winnipeg  
227-231 McDermot  
Avenue

Vancouver: R. Donohoe,  
624 Birks Bldg (opp. C. P. R. Hotel)

Montreal: Cartier Bldg.  
Cor. McGill and Notre Dame Sts.



## H. & D. Corrugated and Solid Fibre Board

Containers will save on your transportation charges, save your floor space, cut down packing expenses, and give positive protection against loss from damage and pilfering. Write for prices and samples.

**The Hinde & Dauch Paper Co. of Canada, Ltd.**

Toronto

Canada